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The Horse.**THE AMERICAN DERBY.**

The race for the American Derby stakes at Chicago on Saturday, the 23d inst., was one of the most exciting in the history of that event.

There were three great horses in the race—Spokane, Proctor Knott and San Jose. Spokane was the favorite in the betting, but the friends of Proctor Knott placed heaps of money on him though Spokane had twice beaten him, once for the Kentucky Derby stakes, and once for the Clark stakes. It was generally believed that Proctor Knott was not at his best in those races, and that when he was, Spokane, or any other horse, would surely be beaten. Alas for the hopes of Kentucky! Thousands of dollars upon Knott only to be captured by the big hatted brigades from the wilds and mountains of Montana who put every dollar upon Spokane they could get taken! Thirty-five thousand people saw the race. There was hardly a vacant foot of standing room on the grounds and not a vacant seat in the huge grand stand. The betting was something tremendous. It was almost a risk of life that the bookmaker's stands were to be reached, the struggle in the betting ring beggarly description. So much money came down from the Northwest that Spokane went to the post a heavy favorite at six to five. The closing odds about Knott were two to one, Don Jose four to one, Once Again six to one, Sorrento eight to one, Long Dance and Retrieve thirty to one each. Fully \$1,000,000 changed hands on the result, and Spokane carried off \$18,000 as his share of the winnings. When the flag fell for the race Once Again was in front, followed by Sorrento, Don Jose, Proctor Knott, Long Dance, Retrieve and Spokane in the order named. Knott shot ahead like a flash. The pace was fairly fast and all seemed content with their positions, which down the stretch and past the stand were not changed except for a moment Don Jose made a spurt. Taaffe Knott had an advantage of two lengths over the others, who were well buncheted, with Spokane bringing up the rear. Past the club-house Knott lost some of his lead, and as the seven horses raced past the three-quarter pole Sorrento was one and a half lengths behind the leader and one-third that distance better than Don Jose.

When the half-mile mark fell behind the racers there was just daylight between Knott and Retrieve who had come up in the rush, while Don Jose was still third and Spokane fourth. Long Dance and Once Again being practically out of the race. Sorrento, who had been running easily in second place all along was cut off on the great turn and while making for the stretch was actually last. He quickly pulled up, however, and as the home stretch was touched he was second again to Proctor Knott, but then the futurity winner gave out and Spokane made his run. So fast did the Montana colt come that rushing past the last quarter he was actually leading while Knott had already fallen into third place. Retrieve dividing the pair. Again Sorrento advanced gamely, but though stronger than those behind could not disturb Spokane, who, without tasting whip or spur, won very easily by a full length. Sorrento was second, a head before Retrieve third, followed by Don Jose, Long Dance, Once Again and Proctor Knott. The latter, cut up and very tired, stopped at the saddling paddock and was taken to his stable while the crowds hurrahed and the band played as a saddle of roses was being placed upon the winner's haunches.

It can no longer be doubted that Spokane is a great horse. He has defeated the best horses in the west, and did it with apparent ease. He was bred in Illinois, by the late Gen. Ronett, and sold to a Montana party who still owns him. He has won the three richest stakes in the west, and must have made his owner an immense amount of money.

A Satisfactory Stable Floor.

W. F. Brown, in the *Country Gentleman*, relative to the respective merits of plank and cement floors, says:

I have been making a study of stable floors for three years past, and am a thorough convert to concrete or cement for this purpose. I had an impression that the first cost would be much greater for the cement floor, but knew it would be cheaper in the long run, on account of its durability, but I find that the material for the cement floor cost me considerably less than the lumber would, and while the labor is probably more to lay the cement than to put down a plank floor, its cost is certainly no more, and where stone, gravel and sand are convenient, the cement floor will cost less than plank. As to durability, there seems to be no limit to the wear of the cement, and men who have used it for years say that they believe it will last an ordinary lifetime without needing repairs, and stables which I have visited, which have been in constant use for more years than would have worn out a plank floor, show no signs of wear. My neighbors who have plank floors all agree in the statement that they can be used only two or three years without repairs, and must be renewed once in five or six years. It is just four years since I built a new barn, and I selected good seasoned lumber for the floors of the stalls, but every stall was in need of repair last fall, and some of them scarcely usable. I began substituting concrete last fall, and as fast as my floors give out, shall replace them with it until all my stalls are floored in this way.

The Farm.**Reclaiming Exhausted Soils.**

A worn-out, sandy soil, if so located that it has a money value, is the most hopeless problem for the farmer bent on making soil fertile. The very first thing such soils need is an increase of vegetable matter. Without this mineral and even barnyard manures have little permanent effect. In a pure sand above and beneath, the stable manure burns out, and the mineral fertilizer almost at once reverts to some insoluble form and does no good. If clover can be made to grow on sandy soil, that is the best of all renovators; but millions of acres have been exhausted beyond even the power of clover to restore to productiveness. For such land the only remedy at first applicable is to sow some kind of grain, oats or barley in early spring, plow it under quickly, and sow more. In this way, during a single season, enough vegetable matter may be gathered in the soil to warrant a sowing of rye in the fall, and seeding with clover the following spring. It costs considerable to waste two or three valuable seedings of oats or barley to be plowed under as green manure, but this is doubtless cheaper than to let the land remain without vegetable matter, and without the possibility of growing clover, the cheapest and best soil renovator.

A neighbor floored a stable 15 feet wide and 44 feet long last autumn, and reports to me that he has a first-class job, and his material cost \$33. He used eight barrels of common cement for the foundation, which cost \$1 per barrel, and six barrels of Portland cement for the finishing coat, which cost \$3.50 per barrel. The first or foundation coat was made by mixing one barrel of common (Louisville) cement with five barrels of broken stone or gravel from which the sand has been screened; mix it dry, and shovel or rake it over until thoroughly mixed. Screened gravel will answer, but broken stone, no piece larger than an egg, is better, as the angular pieces of stone will bind together better. If the stone costs more trouble than the gravel, the latter will answer, but I should prefer to have at least one-third broken stone. This should be wet up and mixed until every pebble or

piece of stone is coated with the cement; then put it down in layers of about two inches at a time, and tamp it until perfectly solid. A broad-faced rammer should be used, and the foundation, when done, should be six inches thick. On putting it down, use a spirit-level and straight-edge and establish your grades.

Horse Gossip.

LORETTA F. will be on the track this season, as good as ever.

BUDDO DOBLE has arrived at the Detroit track with a stable of 27 trotters and pacers.

SRAIGE GOLDUST, by Gov. Sprague 2:20%, and out of Lucille Goldust 2:18%, has got a mark of 2:27%.

H. L. SHANICK, of Ionia, has been offered \$8,000 for his six-year-old Montgomery stallion Cleveland S., but refused it.

If you want a good Clydesdale stallion you can get him on very reasonable terms, either in exchange for other stock or for cash, by addressing George A. Hart, Manistee, Mich. Advertisement.

done it will be the most valuable land in the neighborhood. We never feel like comiserating a farmer who has a wet farm. The vegetable matter which the owners of sandy and gravelly soils vainly long for fills his soil, and he has only to remove surplus water to make its fertility available.

Commercial fertilizers are sometimes used in improving worn-out farms. Wherever they pay on the present crop use them by all means. What the farmer on poor land needs most is larger crops, however they may be produced. If he has the crop he can feed it and make manure. Still more advantageous is the fertilizer if clover is sown with it and it insures a good catch. Then a considerable portion of the fertilizer goes to make clover, which is the best renovator of the soil that the farmer knows. Grass and clover, and more especially clover, are the means whereby American farmers must increase the fertility of their soil.—*American Cultivator*.

How Many Sheep Per Acre.

The question has been asked us, how many sheep can be maintained per acre on a farm as a specialty. We have submitted the question to several persons having some experience in keeping sheep. Those who have answered have agreed generally that the large breeds require more food to maintain them in good condition than the smaller, or Merino breed, which weigh only about 100 pounds. Two reply that light average sized sheep require about the same amount to keep them that one cow does. Another says that he has found with large Shropshire grades that will average eight to nine pounds of wool per fleece, and weighing 130 to 150 lbs. each, are as seven to eight to one cow in the feed to keep them. Now it is estimated that the product of two acres of what we call good land in Indiana will keep one cow under the pasture and dry feed methods of farming. So by these statements it is seen that the product of one acre of good land will keep four head of sheep per year. This is on the assumption that the pasture season is a fair average one. With these facts one may readily estimate the profitability of sheep farming on our fairly good lands. Considering that flocks of large breeds may and do average seven pounds to the fleece, and that about 90 per cent. of the increase is saved, it will be found that there is profit in sheep husbandry. The value of sheep as fertilizers of course must be taken into the count.

The Detroit Driving Club have arranged a series of contests for the afternoon of Thursday, July 4. The meeting will be conducted under the rules of the American Trotting Association. Among the notable events will be the 2½ class, and an attempt at record breaking by the pacer Johnston 2:00%.

3, 4, 5 and 6.

WHITE STOCKINGS trotted a mile and repeat at Terre Haute, Ind., in 2:33—2:17% on June 13th, in an attempt to reduce his record. The second mile is the fastest ever trotted in Indiana. This is the horse bought out of a carriage shipped from the west, and of unknown breeding. He is a game as well as a fast horse.

HANOVER, whose racing days were thought to be over, astonished everybody by winning the Coney Island Cup over the Sheephead Bay course on Tuesday last, with that great mare, Flirtz, in the field. The race was a mile and a half, and was won by Hanover in 2:35 2/5, Flirtz second and Marauder third. The Dwyer Brothers own Hanover, but were afraid to put any money on him.

THE Lansing meeting, which opened at the grounds of the Central Michigan Agricultural School on Tuesday last, had a good list of entries, and drew large crowds each day. The 3½ race the first day was won by Prince Cadmus in straight heats: time 2:54%—2:41, 2:42. The 2½ race was also won in straight heats by Cleveland S., Peter K. second and Beverly K. third. Time, 2:35, 2:30%, 2:30%. Cleveland S. is a son of Montgomery, and is likely to be heard from frequently this season. He has more speed ready whenever it is wanted by his owner.

THE Chicago Horseman remarks: "Michigan sustains its reputation as a nursery of the best trotting stock in the line of stallions. Jerome Turner 2:15%, and Jerome Eddie 2:16%, were bred there; Black Cloud 2:17%, and Mandarin Gift 2:20, were raised and developed in that State. Last season the five-year-old Junemont 2:18% was invincible at home, and won a great race in the Grand Circuit. This year another five-year-old, Cleveland S., gives notice that Junemont must look to his laurels. In the free-for-all race at Three Rivers he made the first turn of the track in 1:10, and it is whispered could have gone the other half at the same rate. This horse stands 15½ hands high, weighs about 1,000 pounds, is a rapid strider, and moves like his sire, Montgomery 2:21%, but has a more perfect gait. He is a bright bay, with star, wears three-eighths toe-weight and light shoes. He does nothing but trot, and my informant says: 'You can pound him on the back with impunity. His owner is crazy about him.' The last remark tells the old story. If his friends wish to bring the owner back to reason let them persuade him to secure a nomination for the Great National Stallion race to be trotted for at Beacon Park, Boston, in September next. There Cleveland S. will meet stallions to the right of him, stallions to the left of him, and stallions younger, which will test his speed and gameness to the utmost."

Cleveland S. was sired by Montgomery 312, owned at Ionia, dam given as Tippo Sabi, a son of Long Island Black Hawk. But we can't find any such horse. Tippo Sabi, by Brooks' New York Black Hawk, is the only one we have found.

Long Dance, Once Again and Proctor Knott. The latter, cut up and very tired, stopped at the saddling paddock and was taken to his stable while the crowds hurrahed and the band played as a saddle of roses was being placed upon the winner's haunches.

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—*Rural World*.

Fresh Cabbage the Year Round.

For winter and spring use the Sure-head cabbage is the best variety to raise. It will mature planted any time in June. It is rightly named, and the heads are always solid. They may be known by their having a protuberance at the apex, something in form like that on an acorn. Properly buried for winter, one can have cabbage, all the year round, for the Sure-head cabbage will last until the time for early cabbage. Late in the fall it should be placed in a trench, feet down, but the feet should not be covered with soil, for that will cause some of the heads to burst. Cover the heads with a little straw and a foot of earth on top.

When all is frozen solid put on a foot of straw (buckwheat chaff is best), and leave till wanted. The straw prevents the earth thawing till late in the spring, and sound, crisp cabbage is assured till near June. This method is on the cold storage principle. A trench of cabbage had been overlooked, and in plowing the field the last day of May heads were thrown out as sound as when put in, and it bids fair to last, in a cool place, till July. In the same trench were those of the Flat Dutch and Winnistead varieties, all had entirely decayed, and the Sure-heads were sound, every one of them.

"Many a moderate herd has been greatly improved and increased in value by the use of a really good bull, and many a good herd has been spoiled and reduced in value by a moderate one.

"If a breeder is determined to keep up a uniform standard of excellence in his herd, and, if possible, still further improve it, no more important subject can occupy his attention than the selection of a stock bull.

"Many a moderate herd has been greatly improved and increased in value by the use of a really good bull, and many a good herd has been spoiled and reduced in value by a moderate one.

"In selecting a bull, we have first individual merit to consider, and then pedigree, but no amount of the latter will compensate for deficiency in the former.

"He must be true to the best type of his particular breed—sound and robust in constitution and well-grown for his age. By well-grown I don't mean high on the leg, but wide, deep and long, standing on short and well-set legs. Particular attention should be paid to his hocks, for many a good old bull is rendered useless by bad hocks. He should have a good muscular (flesh) development in the right places. Straight chest and bottom line, with broad chest and good fore ribs. His eye and general conduct should denote good temper, and the skin be mellow and moderately thick—avoid thin-skinned ones. See that he walks well, gay, and like a gentleman, and, if he is old enough, see what his stock are like, and if possible, have a look at his sire and dam—in fact, all his family connections that are in the herd.

"The next thing is pedigree. Not only see that it contains no impurity, but that the recorded ancestors were, as far as known, good animals, if prize-winners, all the better. Find out, if you can, whether they were regular good breeders, and lived to a good old age, for nothing is more hereditary.

"If every thing is satisfactory, don't begrudge the price, and, if after a trial his stock are satisfactory, don't be tempted by price to part with him."

Horticultural Items.

A MAN who began to sell green peas on the 1st of June says he finds no variety so early and so productive as the Kentish Invicta.

UP to June 8, the cherry districts of Alameda County, Cal., had shipped 14 carloads of cherries to the East. This amounts to about 21,000 pounds of fruit.

ONE cause for mildew on gooseberries, grapes, etc., is too thick foliage or being grown with too thick tops. Thin out thoroughly and you will prevent mildew to a great extent.

GEORGE HILL, of Arlington, near Boston, Mass., grew Sharpless strawberries this year, 26 of which filled a quart basket, and found ready market at 40 cents when other fruit brought 20 cents.

A CORRESPONDENT of the N. E. Farmer uses tobacco stems as a preventive of the asparagus beetle. In the spring he opened furrows in the rows and put in the tobacco stems, cutting with the little end down. I sold them the last of December for 30 cents per dozen.

IF farmers would take a special pride with their poultry, follow the advice given by persons who have some experience, date the eggs as economically as when they are worth 25 to 50 cents per dozen.

I put down 100 dozen fresh eggs, picked up every day two years ago, packed them in coarse barrel salt, beginning the first of August. I wrapped each egg with paper, twisting the ends, and packed the eggs with the little end down. I sold them the last of December for 30 cents per dozen.

I left three eggs in the salt as an experiment, and forgot all about them until the next September, one year and one month, when I took them out. They were clear to look at as they were the day they were put down, and when they were broken they were as fresh, except having dried down a little.

The paper keeps the salt from the eggs, and when taken out carefully they cannot be told from fresh eggs if they have not been packed more than eight months.—EZ.

How to Make a Cool Cellar.

A great mistake is sometimes made in ventilating cellars and milk houses. The object of ventilation is to keep the cellars cool and dry, but this often often fails of being accomplished by a common mistake, and instead the cellar is made both warm and damp. A cool place should never be ventilated unless the air admitted is cooler than the air within, or at least as cool as

that. In some kinds of plants the manure value is very small, while the nutritive value is large. Corn is one of these. It is not a perfect food, because to it must be added large additions of nitrogenous and phosphatic elements; but combined with these in wheat bran, oil meal or cotton-seed meal, it is worth much more than the air within, or at least as cool as

that. The air the more moisture it holds in suspension. Necessarily, the cooler the air the more moisture is condensed and precipitated. When a cool cell is aired on a warm day, the entering air being in motion there is some loss of manorial value; but it is not nearly so much as the loss of nutritive value where green herbage is plowed under without feeding it. In some kinds of plants the manure value is very small, while the nutritive value is large. Corn is one of these. It is not a perfect food, because to it must be added large additions of nitrogenous and phosphatic elements; but combined with these in wheat bran, oil meal or cotton-seed meal, it is worth much more than the air within, or at least as cool as

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A CORRESPONDENT of the Canadian Horticulturist, who writes from Russia,

June 29, 1889.

THE MICHIGAN FARMER.

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Horticultural.

Fertilizing Strawberries.
Geo. Q. Dow, in the Massachusetts Horticulturist, says:

In preparing land for strawberries I should adopt very different courses for different kinds of manure used, and I believe by so doing there is a decided advantage to be gained. If I was using barnyard or stable manure, I should apply a heavy dressing to the ground immediately after plowing and then work it thoroughly into the soil with a disc harrow, smoothing the piece up with a smoothing harrow. What do I mean by a heavy dressing? Well I would put on enough to cover the ground entirely so you could not see the soil anywhere. That is enough for land that is fairly fertile.

But if I was dependent upon commercial fertilizers I should adopt a very different course. I should of course plow the land well, and then should immediately harrow it with a disc harrow and smooth it up, mark it out and set my plants before applying any fertilizers. The plants do not require that first as it will take them two weeks to get a start or good hold upon the soil, which they will upon good land, and no other should be used for strawberries. They will do better without the fertilizer than with it, as the strong fertilizer is too apt to eat or kill the roots of a plant before it gets started. At the same time I began my first cultivating and hoing, say two weeks after setting the plants, I should begin my manuring or feeding the plants.

Before cultivation, go along each row and spread your fertilizer all along the row, and around the plants. They are in a condition now to need nourishment. They have begun to get hungry and a little good fertilizer at this time goes a long ways and at just the time it is needed. The plants are ready to take it up and get the benefit of every ounce you put on. After spreading the fertilizer go on and cultivate, afterwards giving them a careful hoing. By these two operations you mix the fertilizer thoroughly with the top soil above the roots and its goodness is soon worked or washed down to the roots and the plants immediately take it up. In about a week or ten days repeat the operation, and so on through the season until your plants have the growth and you cease to cultivate. By so doing your plants are only fed when they need and when they need it, and a constant and rapid growth is kept up, and you have received full value for every dollar's worth of fertilizer used.

None is wasted. If all is applied at once before planting such a quantity must be used as to kill your plants or many of them. Much is lost by early rains carrying it off or below your roots and its value and strength gone long before your plants have ceased to grow, whereas the other way your plants are constantly receiving fresh food.

Packing and Shipping Nursery Stock.

N. H. Albaugh read a paper on this subject before the American Nursery Association, in which he said:

Three requisites are: Pack so as to preserve the life of the tree; pack as compactly as possible, so as to economize space; and pack so as to save weight in shipping.

The first is the most important. Trees, as fast as dug, should be puddled and heeled in, where they may remain weeks if necessary. Every time trees are moved from one part of the packing ground to another, they ought to be passed through the puddle.

In all packing, some material must be used that will retain moisture a long time. Nothing yet discovered equals the lake or swamp moss, and when this is brought, in sufficient quantity, in direct contact with the roots and secured them all safe.

If less than a carload is shipped, and to large planters, or to other nurserymen, boxing is generally preferable if properly done. In carlots, stock can be safely and securely packed in bulk, putting ten or twenty trees in a bunch, using plenty of moss or damp straw, and thoroughly wetting up the trees when loading them.

In delivering to retail customers, there are advantages in packing each order separately, in bale, puddling well, using plenty of wet moss among the roots, making the bundles very compact, covering the bodies with rye straw or other long packing material, and sewing burlap over the roots to keep the moss in place. Trees so packed will keep in perfect order for weeks, and are much safer, at delivery in the hands of the ordinary farmer-planter, than are open bundles.

Mr. Albaugh had seen trees delivered from boxes to farmers, where the trees were thrown, bare, into the wagon bed, the farmer then spending hours in trading in stores, while the warm sun was beating down upon the naked roots, then driving a dozen miles or more to his home, unbiting the team in the barn lot after dark, and leaving trees unprotected during the night, when a heavy frost occurred, falling upon the bare roots; and then, when his trees died after being wet, he denounced the whole tribe of dealers and nurserymen as swindlers and frauds.

When trees are shipped to farmers, it is probably safest to box them, either after laying them first properly baled, or packed loose, as may best suit the fancy or pocket of the shipper.

In packing in boxes, great care should be taken to pack compactly, filling every available space, as loose packing in a box is not much better than to ship without any packing at all, being much more likely to dry out when loosely packed. Some form of press is almost indispensable to close packing in boxes.

The securing of a lower freight rate on boxed trees is certainly the correcting of a great injustice, as there is always a waste of space in box packing, and the cost of the box is wholly or partly lost.

It is generally cheaper, and the transit is quicker, to choose routes with the fewest transfers, as a change from one road to another almost always consumes more time than 100 miles farther with less change of roads.

To sum up: Handle trees from the time they leave the ground as though they were things of life, and on no account allow them to leave the nursery packed in a way that they will not keep safely a month, for no one knows the day or the hour when a railroad train cometh.

At the close of the paper Prof. Budd, of

Iowa, referred to the matter of puddling. It is all right, if properly done with the right kind of a puddle. If the puddle is of clay, and it partly dries before the trees are planted, it forms an impervious coating over the roots that prevents the moisture from reaching them and death is the result. In such cases the puddle ought to be washed off before the trees are planted.

R. Douglas, of Illinois, said that a clay puddle would kill the trees, as it dries into a "crockery" covering over the roots that keeps out the moisture. Black, mucky soil makes a good puddle. Small trees never need puddling. Too many use too much water in packing trees. More trees are killed from being packed too wet than from lack of moisture.

Cherry Grafting.

In an article upon the subject of grafting, Prof. J. L. Budd, of Iowa, says: "When a few essential conditions are regarded, I have found the cherry quite as easy to graft as the apple. The main requisite in top working is to have the cell structure of stock and scion in the same condition. To secure the dormant stock we must graft early, yet the success will hinge upon the condition of the scion. On this same principle we can graft the cherry when the buds have started in the spring if we cut the scions as needed from trees about equally started. As to root grafting, the same principle holds and scions must be in about the same condition as to starting circulation. If both are in the dormant condition and the root grafts are kept in a cold cellar where they will not start until they are set in nursery, nearly all will grow. The past summer, we sowed 95 per cent of all the cherry root grafts put out."

Potash for Asparagus.

The last of the season's asparagus having been gathered, it is the proper time to apply manure for the benefit of next year's crop. Experienced gardeners and intelligent amateurs need not be reminded that in order to get quick and large growth above ground there must be a strong development below. For vigorous root development there are several essentials, prominent among them, broad space for the roots and plenty of the right kind of plant food for them to assimilate and feed upon. To produce the best asparagus, a good, strong, well-drained soil is best, but any soil may be made rich enough, and possibly where earliness is the first thing to be considered, a sandy or gravelly soil is preferable to a clay loam, or even a sandy one. Four feet apart from any other plant is none too far, for if three rows only are planted four feet apart, the other rows yield the largest and best shoots. Night soil and butcher's offal, highly nitrogenous and very offensive manure, liberally and persistently applied produce enormous crops of large asparagus, but with the fatal defect that there is in the rank growth a slight flavor of the matter the plants were fed upon. But there are other fertilizers which will feed the roots so that they will send up shoots as quickly, as tender, and as large as the offensive ones named, and among these are tobacco stems and a solution of silicate of potash.

Or the stems it is only necessary to say that they should be spread over the surface of the bed from five to six inches thick as soon as the crop is off. The silicate should be applied in the form of a weak solution—10 lbs. to the barrel or 40 gallons of water, a gallon weekly during the growing season of each plant, if the best results are aimed at. Asparagus roots fed with these fertilizers produce as rapid a growth of large and tender shoots as those nourished with nightsoil, putrid meat and other abominations, with the advantage that the delicate flavor of the vegetable is preserved at its best. Perhaps some asparagus which I raised this year would not attract attention in New York market by its size and general appearance, though shoots seven to eight inches long, and three-fourths to an inch in diameter, were the average results of the growth of twenty-four hours. These shoots after cooking thirty minutes were as tender and delicately flavored as young peas. In conclusion let me warn experimenters against being imposed upon by accepting silicate of soda, a very different thing, and a cheaper substance much used in the arts, but of almost no account as a fertilizer for potash plants. It might be added that since the only purpose of the silicate of potash in this mixture can be to supply potash for the crop, and it is not easy to get of good quality, and by no means easily made, the chloride of potash, supplying the same plant nutrient in a less soluble form, being easily obtained, is worth trying as a substitute.—B. F. Johnson.

Simple Requisites for Quinces.

Poor result with this valuable fruit is generally due to inattention to its few needs. As a stunted tree cannot produce perfect fruit, the first effort should be to infuse health and vigor. Starting with a healthy young specimen, the annual increase of branches should never be retarded for a single season, and this is readily prevented by enriching the soil. The quince delights in strong food, and moisture, but soil that does not permit free passage of water from roots of trees will become sour, and thus produce ill-health, and much as the quince loves moisture, it cannot endure a spring or boggy footing. Plow deeply and make the soil mellow, as the numerous fibres are particularly averse to hard croddy ground. Barnyard manure and potash in some form is its especial delight; it is useless to undertake quince-culture without using this with a liberal hand. Salt, sparingly applied, has produced good result, but it is a dangerous article in the hands of an ignorant person. Thorough cultivation for the first few years pays well, but once firmly established, all that will be necessary is the regular annual top-dressing of short manure or rich compost, with the addition of a little salt or unleached ashes. By no other means can we secure large showy fruit, and this is just where the profit is in quinces.

In regard to pruning—use the knife sparingly. Very little cutting will answer. Thinning out the superfluous small twigs embodies all the instruction needed. We must look to strong young shoots for best fruit; old, hard branches produce only inferior fruit. The most serious drawback to quince-culture results from the work of the bora, a larva well known to orchardists. Many preventives are recommended—such as encircling the body of the tree close to the

ground with paper, or other material; or in simply tarring the bark. If these pests are removed with a sharp-pointed knife regularly each year, very little is to be dreaded from their depredations. The little reddish-colored spots, with perhaps an accumulation of sawdust at the entrance, generally advertise the borer's home, and in its earlier stages it is easily found and killed. To renew vigor in an old quince tree, cut back severely all branches, and scrub the bark clean with ordinary thick soap-suds, or an emulsion of whale-oil soap. Loosen up the soil for some distance, and dig in short, well-rotted manure. In a year or two thereafter, the owner will be surprised at the crop of fine fruit that his "worn-out" tree will produce. If the body be nearly eaten off by borers, nothing will rejuvenate it; a young and healthy tree must be substituted.—Josiah Hoopes.

Fighting Insect Enemies.

This matter is at present occupying the attention not only of the experiment stations, but of intelligent and progressive people generally. Popular Gardening devotes several pages to the matter; but I have felt a little surprise that almost all of them seem to give but little space to protection by means of arrangements for fencing the insects away. Of course this remedy can be applied only to small plants like melons, cucumbers, vines, etc. It is true some of them hint that boxes with mosquito netting tacked over the top will do; but it seems to me that mosquito netting is altogether too frail; besides, the Medina bugs have learned the trick of crawling through it. Nothing answers with us like the wire-cloth protectors which we devised last year, as mentioned in our catalogue. Granting that Paris green, pyrethrum, slug shot, or things of this sort will kill the striped melon-bug, you have to apply it as soon as the first plant is up. On our grounds the striped bug actually digs into the earth to meet our choice melons as they begin to push through the soil; and very often the first leaves are eaten off before they are expanded; and to kill them with chemicals or poison you have to apply it as each leaf comes out; whereas the wire-cloth bug protector can be put on before the plants are up, if you choose, and it makes a sure thing of the whole business until the plants are big enough to raise the covering so as to stand over them like an umbrella. On our grounds we use altogether three or four hundred of them. The sight of the bright green fresh plants, with their first leaves without scar or bluishness, is to me a real cause of rejoicing. We have frequently put the wire covering over a part of the hills and left some of the vines uncovered. The result is, that the first warm day we have, those outside of the enclosure are eaten up in a few hours, and where a leaf stretches up so as to touch the wire covering, a cluster of bugs station themselves on the wire cloth and gnaw the leaf as fast as it grows. I do like to have appliances that are sure and absolute, even if they cost some money.—Gleanings.

Raisins, Domestic and Imported.

At this time the article of raisins is attracting considerable attention at home and abroad. The supply of Malaga raisins at the east is exhausted. The available stock of Valencia raisins at the east has been successfully cornered and an effort was also made to concentrate California stocks, but it proved unsuccessful. Indications point to a small supply of raisins on hand for trade purposes during the four months intervening in the marketing of the new crop.

Since January 19th, 1889, the receipts at the various ports of the United States have amounted to 20,565 quintals. These receipts prove to be somewhat in excess of the supposed supply at the date of first report; while the total crop has exceeded the figures of that report by 69,000 quintals. One of the noticeable features of the Valencia raisin pack has been its poor keeping quality. Complaints from this cause have very general. Spanish exporters explain or attribute the cause in a large measure to the grapes being gathered before they were quite ripe, and that they were not allowed to remain a sufficient length of time on the curing ground. Growers fearful of being overtaken by bad weather housed their raisins before they were thoroughly cured. The bad weather came as expected and did considerable damage. The causes above mentioned, and the storms and bad weather during August and September, resulted in about 10,000 tons of raisins being shipped to France and parts of Spain for wine purposes.

The Malaga district, from whence the United States in years past has received as

It will not shame
friends and the general public by the circulation
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SAMUEL JOHNSON,
June 17.
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SUMMARY.

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bronze statue of Gen. Cass, now in Statuary Hall at Washington, was cast, has been presented to the University collection by Hon. Paul Parsons.

Jackson is again hoping to secure the Cincinnati Jackson & Mackinac railroad. The company building the line to go that way has a bill of \$50,000 will catch the line.

Accommodations for two hundred horses have already been provided on the grounds at Union Park at Saginaw for the Northeastern fair, and other buildings are being hurried along. The track is also being improved.

Fred White, a prominent farmer of Berrien County, has filed a bill of complaint against the Lake Shore Railroad Co., charging the same with being in business now. Other Berrien County farmers support the charge.

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Little Hayti has had three ministers of war within three months, and one of them, Gen. Anson, appropriated \$30,000 of the republic's funds, and got away with the plumb. He was succeeded by Gen. T. C. Wright, for a consideration of \$250,000, and left the stand with the money. Money will do almost anything in Hayti.

Miners at Spring Valley, Ill., have been locked out since the first of May because they did not accept a reduction in wages. Most of the miners are evicted from their homes, so that the town is now a mass of principally of women and children, who are in a destitute condition. Many families are about without food.

All the business in the Samoa conference was transacted in the English language, even though being written in English, a very unusual if not unprecedented occurrence in

foreign diplomatic history. The treaty will not be published until the nations interested have formally ratified it, but it is said to be not displeasing to our government.

There is a moral conveyed to college students in the statement that the captain of the naval frigate crew and the captain of the women's baseball nine at Yale failed to pass their examinations. Physical culture is all very well in its way, but a man needn't enter an expensive college like Yale to become the captain of a base ball nine.

Mrs. R. H. Hayes, widow of President Hayes, died at Marion, O., on the 25th, from the effects of a stroke of paralysis she received on the 21st. She was 58 years of age. Since she left the White House, Mrs. Hayes has taken an active part in temperance, missionary and charitable work, and was president of several national and State associations of that kind.

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The French government has stopped the payment of Gen. Boissier's pension. He will bring suit against the government to compel payment.

French authorities are undecided and fluctuating because of the attitude of the various crowned heads. The Czar has snubbed Italy by a pronounced coldness to her ambassador at a state ball; the Emperor Francis Joseph in a public address has intimated that the idea of a great alliance between France and the Czar would pass through Stuttgart and the Czarowitch passes through Stuttgart unrecognized and unweeded by Germany.

Pontiac, has a nice
lina pigs, bred from
offspring of the
Grand Trunk Air Line

choice pigs from selling
at the auctioneer's
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Poetry.

MONEY MUSK.

In shirt of check, and tallow'd hair,
The fiddler sits in the bushy chair,
Like Moses' basket strung at there
On the brink of Father Ne.

He feels the fiddle's slender neck,
Plucks out the notes with thrum and check,
And times the tune with nod and beck,
And thinks it a weary while.

All ready! Now he gives the call;
Cries "Honor to the ladies!" All
The jolly traps of laughter fall
And ebb into a happy smile.

D-O-W-N comes the bough on every string;
First couple join right hands and swing."

And light as any blue-bird's wing
"Swing once and a half times round!"

While Mary Martin all in blue—
Calico gown and stockings new,

Ad d'quited eyes tell that you true.

Dance all to the dancing sound.

She flits about like Moses Brown,
Who holds her hand to keep her down,
And thinks her hair a golden crown,

And his heart turns over once!

His cheek with Mary's breath is wet,
It gives a second somerset.

He means to win the maiden yet.

Alas for the awkward dance!

Your stoga boat has crushed my toe;
I'd rather dance with one-legged Joe,
You clumsy fellow!" "Pass below!"

And the first pair dance apart.

Then "Forward six!" advance, retreat,

Like judges say in sunbeam street;

"Tis Money Musk byerry feed;

And the Money Musk by here!

"Three-quarters round your partner swing!
Across the set!" The rafters ring.

The girls and boys have taken wing,

And have brought their roses out!

"Tis "Forward six;" with rustic grace,

And rarer far—"Swing to place!"

Than golden clouds of old point lace,

They bring the dance about.

The clasping hands all—"Right and left!"

All swiftly weave the measure deft

Across the floor like lightning.

And the Money Musk is done!

Oh, dances of the rustling husk,

Good night, sweethearts, 'twas nowvun dusk.

Good night for aye to Money Musk

For the heavy march begun.

—Benjamin F. Taylor.

GREEN THINGS GROWING.

Oh, the green things growing, the green things growing.
The faint, sweet smell of the green things growing!

I should like to live whether I smile or grieve,
Just to watch the happy life of my green things growing.

Oh, the fluttering and the patterning of those green things growing!

How they talk each to each, when none of us are knowing!

In the wonderful white of the weird moonlight,
Or the dim, dreamy dawn, when the cocks are crowing.

I love, I love them so—my green things growing;
nd I think that they love me, without showing!

For many a tender touch they comfort me so much.

With the soft, mute comfort of green things growing.

And in the rich store of their blossoms glowing,
Till for one I take them on my bestowing;

Oh, I should like to see, if God's will it may be,

Many, many a summer of my green things growing.

But if I must be gathered for the angel's sowing,
Sleep out of sight awhile, like green things growing.

Though dust to dust return, I think I'll scarcely mourn.

If I may change into green things growing!

Miscellaneous.

FARMER HETTY.

BY MATTIE DYER BRITTS.

Hester Brand stood in her cool, clean dairy, a linen apron tied around her plump waist, her round arms bare to the elbow, working a huge bowl of fresh, sweet butter into dainty prints, each stamped with a rose on top.

There was no sham about Hester's prints. A good 16 ounces to the pound, every one of 'em. No sham about Hester either. She was just what she pretended to be, and greatly respected by everybody, notwithstanding a small inclination to have her own way which gave some folks room to call her stubborn. But Hetty's head was usually set in the right direction, and if her tongue did grow a trifle sharp now and then, everybody knew that a good, kind heart lay beneath.

A comely woman still, spite of her one and forty years. She was a pleasant object to look upon as she stood in the inviting dairy. So thought a stalwart farmer who presently appeared in the doorway, and rather awkwardly addressed her.

"Good mornin', Hetty."

Hester looked up, and pausing a moment in her work, answered:

"Morning, Nathan. Why didn't you go to the house?"

"I did, first thing, Hetty. Lindy said I'd find you out here."

"Well, you have found me, but I don't receive callers in my dairy. I never can teach that stupid Lindy anything."

"Wal, I ain't goin' to pester ye long, child," said her visitor good naturedly. "I jest want to speak to ye on a little matter of business, if so be as you're agreeable."

"Go 'long and sit down on the side porch, then. I'll be there as soon as I finish this print."

"Sartin! Sartin! Any way to suit ye, Hetty," and with a whimsical twinkle in his blue eyes, Nathan Strong took himself off to the house.

Hester, with a faint little pucker of impatience on her brow, took her own time to finish the print and set the whole crockful into the stone trough, where the bright water from a living spring rippled through the dairy and kept all things fresh and cool in the hottest weather.

"I'll bet a cent! Nate Strong has got a fool's idea in his head again," she soliloquized as she drew down her sleeves. "If he has, he'll go home with another, that's all I've got to say!"

Stopping at the kitchen door to bid Lindy go to the dairy and wash up the butter things, she went around to the porch where Nathan waited for her.

"Will you go into the house?" she asked. "No, thank ye, if you don't mind, we'll just stay out here. The smell o' them vines

is sorter sweet like, an' I kinder fancy sittin' under 'em."

"Just as you please," said Hester, seating herself in a splint-bottomed chair. "All well over to your place, Nathan?"

"Wal, yes, I be. Aunt Betty is sorter complainin' with rheumatiz, as usual. She's gittin' most too old to keep house, I reckon."

Hester frowned and thought, "He needn't think I'll go keep his house for him," but she said nothing.

Nathan, who was a bachelor and owned the farm joining Hester's, saw the frown, and understood it. He quietly went on.

"Wal, I said, I'd come on a little busness, this mornin'. Was ye thinkin' o' runnin' the hill farm on your own hook, this season?"

"Why, I hardly know, Nathan. Yes, I suppose so."

"How would you like to rent out a field or two, if it would pay pretty well?"

"I don't know. I hadn't thought of it." "Suppose ye think of it now, then. I'd like to rent that one little patch on the south of my land, to put in wheat this fall. Would give ye grain or money, jest as suits ye best."

"Well, I don't know," replied Hetty. "I reckon I might let you have it as not, I'd better take grain. We won't be apt to raise as much as common this year."

"I guess I might oblige ye," said Nathan. "We'll fix it up all satisfactory." He hesitated an instant, then added, "Don't ye find it pretty tough tryin' to farm it alone, now Jacob is gone, Hetty?"

"I guess I'll make it, if I do," replied Hetty, tarty. "Jacob Brand was a big fool to do as he did at his time of life, but that's no reason the farm shouldn't go on."

"A fool for gettin' married, Hetty, or for goin' out to Colorado?" asked Nathan, the whinny twinkle in his eye again.

"Well, I don't know," replied Hetty. "Wal, I think myself, it was a pity he sold his half of the farm and went pokin' off them," pursued Nathan, calmly.

"I don't care for the farm, my half is more than enough to support me," said Hetty.

"Wal, I can't agree with you on the marryin' part, Hetty, girl. I'm nigh as old as Jacob—I'll be forty-five come Christmas—but I'd marry too, quick, if you would have me."

Hester jumped up, her eyes flashing.

"There, Nathan Strong! I knew you wouldn't go home without makin' a fool of yourself."

"Softly, Hetty, girl, softly! It ain't a sign o' a fool to like a woman from the time she's a mite o' school gal, an' never to look at any other woman for her sake, is it?"

"No, but, Nathan, I've told you often and often——"

Nathan rose too, and interrupted her.

"Hear me out this time, Hetty, an' I won't bother you again. Wal, not soon, anyhow. Come, Hetty, this is a lonesome life, ain't it, dear?"

"Yes."

"And it's a sight o' worry for a woman to run a farm by herself, child."

"I don't care! besides I've got a good hired man, and Lindy is first rate in the kitchen."

"But that ain't all, Hetty."

"Very well, when I want more help I'll call on you."

Nathan colored, but quietly answered,

"You know I'd give you that, Hetty, any day, whether you marry me or not."

"I won't, Mr. Mills. Good day."

Hester drove off, leading the calf behind the buggy.

Old Bob glanced around now and then as if he did not altogether relish his company.

"I didn't intend to comfort you. I mean to show folks that a woman can live by herself, and manage things without having a man tacked to her apron-strings, now put that in your pipe and smoke it."

"I don't smoke, Hetty. Remember hearin' you say once, that you was dead agin' smokin' so I wouldn't learn, but I'll keep in mind what you say. Hope you'll change your mind some day."

"I shall not change it. I'll not be a dunce at my age."

"No, I reckon you couldn't be that, if you tried, Hetty. Wal, I'll go. Ef you need any advice or help, remember, you're promised to call on me. Will you shake hands before I go?"

Hester gave him her hand and he went away.

"The silly fellow!" she said to herself when he was gone. "To think he will stand on likin me in spite of oh, everything! But I won't give up! I don't like to be liked!"

"I'm not lonesome; I don't need anybody's help or company. Oh, dear Jacob! Jacob Brand, how could you go and do that way?"

And by way of proving his strong-mindedness and independence, Hetty sat down and had a good cry all to herself.

Truth told, Hester felt her brother's depression dreadfully. She had been so sure they would always live together on the old homestead. Her real reason for refusing Nathan Strong's offer many years ago had been that she would not leave Jacob.

Hester gave him her hand and he went away.

"It may be Eben," she said. "Oh, I hope it is! Can't stand it much longer!"

She turned round to look back and see if the rider was Eben and did not see a large rock before her. Just then the calf gave a spring, jerking the rope violently. Bob whirled, and the buggy struck the rock and went over, and calf, horse, buggy and woman were tumbled together, the rope still fast to Hetty's wrist, and the beast tugging at it with might and main.

Hetty screamed in spite of her.

There was an answering shout. A horse galloped madly up. A man sprang to the ground, snatched his knife from his pocket and cut the rope. As the freed calf darted off he caught the lines, controlled Bob with a quick hand and lifted Hetty from the upset buggy.

"No, I've stood it this long and I can stand it longer!" she would say grimly, when she felt any signs of relenting.

She soon discovered that it was one thing to live on a farm where skilled labor directed everything, and quite another to undertake the directing herself.

In dairy, poultry yard and garden, or among the sleek cows, she was entirely at home.

But with the heavier work she did not know what was best to do.

Eben Sharp had not been perfectly trusty before his arrival, but he had soon shown their want of a head.

Even Eben could not do everything,

and it seemed as if he drew down her sleeves. "See me, I'll bet a cent!" she said.

"I jest want to speak to ye on a little matter of business, if so be as you're agreeable."

"Go 'long and sit down on the side porch, then. I'll be there as soon as I finish this print."

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THE SUMMER PICNIC—BEFORE AND AFTER TAKING.

object, gladsome picnic morn! How cool the air, the skies how bright. And mortal joys are born To fill the heart with wild delight.

The bosome from the tree-crowned hills, The table of the woodland rills, The wild bird's song which grandly trills And the forest arachis; trees;

The mystic whisper of the trees,

The drowsy hum of honey bees;

A scene designed the gods to please,

A dream of happiness and ease,

Then our being thrills.

Every dreadful picinic night!

I almost wish that I were dead;

I'm looking like a perfect fright,

And filled with aches from feet to head.

I was led incessantly since morn

My clothes are wet and stained and torn,

I'm feeling miserably all day long;

I can't sleep at night, I was born.

The house were full of beggar's lace,

We ran rain-water without ice;

And dinners full of ants aren't nice;

Hereafter a picnic device

Will teach me—in a horn.

FLOWERS AS EMBLEMS.

A Form of Heraldry Whose Mysteries Are Fast Finding Out.

Love, Historical and Romantic. Regarding the Various Floral Badges Told in Ancient and Modern Myths, Traditions and Theories.

"A good symbol," it was the opinion of Emerson, "is the best argument, and is a missionary to persuade thousands. There is no more welcome gift to men than a new symbol." This says the London Standard, may possibly account for the rise, popularity and persistence of floral symbols.

Yet it seems difficult to explain why Wales should have chosen the leek for its cognizance, though the Cymric poets have a good deal to say about the broom. The Scottish thistle is more to the point. Yet the northern botanists are by no means at one in assigning that heraldic plant to any known species, or even in agreeing that it is a cardus at all. The plant with which Boreas is decked on festive days is usually some thistle, which certainly is not a wild plant in North Britain. The rose, has, of course, a romantic tale to explain its choice as the emblem of old England, though, like the majority of such tales, this legend may belong to the myths of the post-prayer age. The fleur-de-lis of France is still less easy of explanation, yet, though it is conventionally regarded as aily, the heralds say that it is so only because it is a symbol of strength.

The extract from the "Fugitives" is as follows:

"The old man who had a garden in the

meadow, he used to go there

and sit under a large tree, and

he used to sit there

and smoke his pipe, and

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WOUNDS IN DOMESTIC ANIMALS.

Wounds occur so frequently to our domestic animals, especially the horse, that it is a matter of great importance that the stock owner should be equal to the management of them, or should understand the proper means to adopt till reliable veterinary assistance can be obtained. Wounds are called "incised," "punctured," "lacerated" or "contused," according to the manner in which they have been inflicted. Incised wounds are cleanly cut, with straight edges, and often heal readily if the skin is brought together and retained in position by sutures or otherwise. This is called healing by adhesion, a good exemplification of which is seen in "pinning up" after bleeding. Large, deep, incised wounds will not often heal in this manner, there being often extensive suppuration.

Punctured wounds may be inflicted by the stab of a knife, the horn of a cow, the prong of a fork, the end of a stake, &c. They are often the most dangerous, as, from their depth, important blood vessels may be injured, and if in the body some deep-seated vital organ may be injured. Or, if in the neighborhood of a joint, it may also be a very serious affair, as, if the joint itself be injured, it may occasion the alarming condition called "open joint."

"Lacerated" wounds are those that are torn asunder, and if extensive, the ragged edges of the wound, their vitality being destroyed, will probably be removed by sloughing, leaving an exposed surface of a greater or less extent.

"Contused" wounds are those in which, besides the wound, a considerable bruising of the surrounding parts has been produced.

The bruiser renders the case more complex, as, besides simple repair of cut, the bruised tissue must be restored or removed. A "contusion" is a bruise or injury without a cut in the skin.

It should be borne in mind that the very common practice of applying anything of an irritating or a stimulating nature for the purpose of "healing it up quickly," or "keeping out the cold," &c., is calculated to do much harm. Instances are not unfrequent of boiling tar and tallow being poured into wounds of the feet, with the very best intentions, but such practices cannot be too strongly deprecated.

In the treatment of wounds, the first endeavor is to arrest the bleeding, if it exists.

The difficulty in checking it will much depend upon whether an artery or a vein is injured. Arterial blood may be known by its coming from the wound in jets, also by its bright scarlet appearance. Venous blood is of a dark red color, and the stream is continuous.

Should the escape of blood be from a large artery, it may be necessary to ligature it. And in some cases this may be rather a difficult matter.

But pressure applied over the course of the artery between the heart and the wound is often effectual. Also, should the injured blood-vessel be deep-seated, or difficult to reach or discover, pressure applied immediately over the wound, and continued for some time, may usually be successfully adopted. Suturing, as the chloride of iron on cotton wadding, or caustics, are sometimes useful. But the continuous application of cold water, in conjunction with pressure, will probably be found sufficient in most cases of emergency.

In wounds of the extremities, the bandage called the uniting bandage is often very serviceable in closing the wound and arresting the bleeding by pressure. This consists in a long, narrow bandage, rolled fr each end; then, by applying the central part opposite the wound and drawing each roll forward, the edges of the wound are brought together and pressure applied.

Bleeding having been checked, all foreign substances must be removed; and this may occasionally be a matter of some difficulty; as in the case of punctured wounds inflicted by pieces of wood, stakes or rails, silver or broken pieces may be left in that may easily be overlooked. This should be done with out washing if practicable; but when dirt, dust, &c., render washing the wound necessary, tepid water is all that is required, and this should be gently squeezed from a sponge or cloth held over the part. It cannot be too strongly insisted that irritating or stimulating applications to a flesh wound are always injurious, and always retard the healing process. All foreign matter, blood clots, &c., having been removed, the edges of the wound must be brought together by means of stitches, which may be either of wire, catgut or silk; or the parts may be held together by pins, similar to "pinning up" after bleeding, using as many pins or stitches as necessary.

These should be about an inch to an inch and a half apart, and not drawn too tightly.

In order to check the excessive swelling and inflammation that frequently result in lacerated and contused wounds, foams of warm or tepid water, according to the season, are beneficial; and if the fever should be high a purgative should be administered. In deep wounds it is best if possible to have a dependent office, that the matter from the wound may be discharged from the bottom. Tie dressings or local applications to wounds should be of the simplest character. The eminent surgeon, Sir William Ferguson, preferred cold water, and his value has often been noted in veterinary practice. Or carbolic acid may be used—one part of carbolic acid to eight or a hundred of water. It will be found better to use mild lotions rather than ointments or oleaginous preparations, as these cause dirt to adhere to the part, and it will be more difficult to keep clean, cleanliness being an important consideration.

Wounds are healed by the process of adhesion, also by suppuration and granulation. In the horse, healing by adhesion seldom takes place unless in slight incised wounds, in a great measure owing to the difficulty of keeping the parts perfectly still. If healing by adhesion does not take place, a discharge of a watery fluid occurs, and this is succeeded by pus, or matter. If the pus is cleared away and the wound examined, it will be found to be filling up with a number of bright red granulations, which bleed readily when touched. This is nature's mode of filling the cavity caused by the injury. The process of suppuration is longer in coming on in the ox tribe than in the horse, and the pus or matter is of a different character. Instead of being, as in the horse, yellowish, creamy and liquid, it is more like thin curd, and has a very unpleasant smell.

Wounds of the muscles heal much more rapidly than any other part. Wounds of

ligaments and tendons are slower in healing, and injuries to bones still more tedious, as they frequently will not heal until a part exfoliates and is cast off. This may be known by the excessively bad smell of the wound. Wounds of the skin are also tedious, as new skin is never produced in the middle of the wound, but it gradually grows from the edges until the wound is closed. This new skin never produces hair, therefore it is of importance not to cut off or destroy any skin that can be saved, so that the blemish or scar may be as small as possible—though the old skin is often in time drawn over the wound by the new to a great extent, and the expected much diminished.

CANADA THISTLES.

ARMADA, June 15, 1889.

To the Editor of the Michigan Farmer.

Is there a law regarding the destruction of Canada thistles? If so, how would one proceed to enforce? This section is being entirely overrun with thistles. While many farmers are persistently fighting them down, others are doing nothing but letting their fields for a new crop. In order to keep them in check every man must of his own accord destroy his thistles, or be compelled by law to do so, and I would like to learn through the FARMER how to start the fight.

E. L. M.

The law regarding Canada thistles will be found in Chapter 67 of Howell's Annotated Statutes, Sections 2233 to 2239 inclusive, and is given in full below. Our correspondents can call the attention of the supervisor of his township to any violations of the law, and he will be nuisance abated:

SECTION 1.—*The People of the State of Michigan enact*, That it shall be the duty of every owner, possessor or occupier of land, to cut, or cause to be cut down, all the Canada thistles growing thereon, and the seed to be thrown away, by or through the same, so often in each and every year as shall be sufficient to prevent them going to seed; and if any owner, possessor or occupier of land, shall, knowingly, suffer, or permit, any Canada thistle to grow, and the seed to ripen, so as to cause or endanger the spread thereof, he shall, on conviction, be liable to a fine of ten dollars for every such offence.

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and Australia in limited numbers, the prices ranging from \$15 to \$150.

All present reported their flocks in good condition, but that sheering would be later than usual, owing to so much cold, wet weather.

After a very pleasant and interesting meeting the convention adjourned to meet at Pontiac, Mich., the first Wednesday in March, 1890.

FRANK EAGAR, Secretary.

HARVEY KING.

Saturday, June 15, the citizens of Detroit were astonished by the announcement of the death of Harvey King, which took place at King's Mills, Lapeer County, at an early hour Friday evening. Mr. King, up to the time of his death, was in apparent good health, and was eating his supper when he was seized with a fit of apoplexy, which resulted fatally before the members of his family could realize what had happened. Mr. King was born in New Hampshire, and was 72 years of age at the time of his death. He had been a resident of Detroit for 51 years, having settled here in 1838. He first located on what is known as the Cass farm, in this city, where, in connection with his farming interests, he carried on the dairy business. He was successful, and when the Cass farm was platted he purchased a part of it. On this he built the Brighton House, which was largely patronized by farmers from the surrounding counties who made Detroit their market, before the railroads were built, and when the principal freighters to and from the interior of the State was done by teams. The necessity for stock yards then arose. Mr. King opened the first in the city in connection with his hotel, which proved a great success and for years was a source of great profit. They then proved a great success and for years were a source of great profit. They then became too small for the growing business of the city, and he secured another site on the lines of the railroads, and built the present yards which have also proved a success.

In all his business ventures Mr. King had been successful, but a few years ago, through endorsing for a friend, he was called upon to pay \$185,000. This would have staggered a younger man, but he at once took hold of the business in which his friend had failed, paid off the whole of the indebtedness, and again became too small for the growing business of the city, and he secured another site on the lines of the railroads, and built the present yards which have also proved a success.

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Mr. King was a man of great energy and ability, and the friends of the deceased have expressed their sympathy and regret at his loss.

CORN.—Firm and higher. No. 2 quoted at \$6 1/2 bu.; for spot, and 36 1/2¢ for July delivery. No. 2 yellow quoted at 36 1/2¢.

OATS.—Quoted for No. 2 white, 28 1/2¢ for light mixed, and 23 1/2¢ for No. 2 mixed.

HARLEY.—The range is 90c-\$1 10 per cent.

Market steady. Receipts for the week, 720 bu.; last week, 2,300; shipments, nothing. Stocks in store, 265 bu.; last week, 368 bu.; last year, 559 bu.

FED.—Bran quoted at \$1 50-\$1 11 10 per cent.

RYE.—Market steady. Quoted at 47c bu.

CLOVER SEED.—Market quiet. Prime quoted at \$4 50-\$4 55 bu. for October delivery.

BUTTER.—Dull and weak. The range for good to choice dairy is 10 1/2c 1/2 bu., and for creamery 14 1/2c 1/2 bu. Receipts are heavy, and the market is firm.

CHEESE.—Quoted at \$2 90 for new. Old, 11 1/2c 1/2 bu. Market quiet.

EGGS.—The market is steady at 12 1/2c 1/2 bu.

MANUFACTURED.—Steady at 25c-\$300 1/2 bu. to quality.

HONEY.—Market dull; now quoted at 12 1/2c for choice comb in frames.

FOREIGN FRUIT.—Lemons, Messina, \$4 50-\$5; oranges, Messina, \$4 00-\$5 50; box, \$4 25-\$5 00; California, \$4 00-\$5 50; bananas, yellow, \$1 25-\$2 50; figs, \$1 25-\$2 50; pears, \$1 25-\$2 50; pineapples, \$1 25-\$2 50.

SAINT.—Michigan, \$2 00-\$2 50 per bu. for fresh receipts. Receipts and demand about even.

BEEF.—Steady at 25c-\$300 1/2 bu. to quality.

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